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EXAMINER

MURPHY, DILLON J

ART UNIT	PAPER NUMBER
2625	

DATE MAILED: 06/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/072,000

Applicant(s)

SMITH ET AL.

Examiner

Dillon J. Murphy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 36 is/are allowed.
- 6) ☒ Claim(s) 1,2,4-15 and 17-35 is/are rejected.
- 7) ☒ Claim(s) 3 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- This action is in response to the amendment filed on May 9, 2006.
- Claims 1-36 are pending.
- Amendments to the specification are acknowledged and accepted.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 9, 2006 has been entered.

Allowable Subject Matter

Claim 36 is allowed. Claims 3 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Double Patenting

The double patenting objections of claims 11-13 and 27-29 has been withdrawn.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear whether the "part" limitation in lines 3-4 of claim 1 reciting "revising a revisable software component for a part of the group of multifunctional printers" corresponds to a part of the group or a part of the printers.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4-6, 11-14, 19, 24, and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Love et al. (US 6,091,508) in view of Minamizawa et al. (US 6,298,421), hereafter referred to as Love and Minamizawa.

Regarding claim 1, Love teaches a method of revising software in a printer comprising revising a revisable (Love, col 4, ln 6-22, wherein multiple pieces of software may be downloaded to printer to revise/update functions of multifunctional printing system. Also see col 4, ln 37-39, wherein code is created by using a standard compiler and linker. Code in a compiler may additionally be a revision of previous code) software component of the multi-component software for a part of a multifunctional printer (Love, fig 4, multifunctional printing system);

Providing all other revisable software components for parts of the multifunctional printer (Love, col 4, ln 37-39, wherein all source code is compiled and linked. In col 4, ln 47-62, of all the code compiled for software, "external" routines are routines that are resident in the printer, and "internal" routines are a revised component. External routines are provided in the Relocation Table in the COFF file, and internal routines are provided in Raw Data Section (col 5, ln 59-62) of COFF file);

Qualifying the revised software component (Love, col 4, ln 40-41, compiling the code characterizes software into object code files) in conjunction with all of the other revisable software components (Love, col 4, ln 6-15, ln 40-41, wherein all code is compiled, and wherein software components for multifunctional printing system are revised);

Bundling the software components as a software bundle wherein the software components comprise the qualified, revised software component (Love, col 4, ln 41-43, aforementioned revised and qualified object files are combined (i.e. bundled) into a single software bundle); and

Loading the software bundle on to the multifunctional printer (Love, col 6, ln 9-12, after code preparation is complete, software bundle is loaded onto printer. Also see fig 4 teaching a multifunctional printing system).

Love does not disclose expressly the method of revising software in a group of multifunctional printers, nor does Love disclose expressly revising, providing, qualifying, and bundling for the group of printers. Love also fails to disclose expressly the method further comprising searching and locating the software bundles that represent updated

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software components for each multifunctional printer via a web based graphical user interface. Minamizawa, however, teaches a method of revising software in a group of multifunctional printers (Minamizawa, col 1, ln 40-42, updating software, and col 5, ln 26-30, MFP) comprising searching and locating the software bundles that represent updated software components for each multifunctional printer via a web based graphical user interface (Minamizawa, col 7, ln 35-55, wherein software upgrades are developed by the manufacturer for a group of printers, e.g. a specific model. By selecting a printer to upgrade, a part of the group of similar printers is upgraded. A computer is used to access the Internet, wherein the computer comprises a GUI as seen in fig 4. Using the Internet and the well-known method of using an Internet browser to navigate to a webpage, the user searches and locates software at the Internet homepage. Searching and locating is required to distinguish between different software programs provided to a plurality of printers, col 7, ln 55-65. The aforementioned method is not limited to a single printer or a single use. By performing the software revision multiple times on a plurality of printers, the software is loaded on to plural user selected MFPs).

Love and Minamizawa are combinable because they are from a similar field of endeavor of updating peripheral software. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the multifunctional printer of Minamizawa comprising the method of searching and locating software with a GUI for a plurality of printers with the method of revising, qualifying, bundling, and loading of software of Love. The suggestion for doing so would have been to download the software to control the device from an external source (Love, col 1, ln 50-53), as well as

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to use a multifunctional device to expand the capabilities of a single device and to minimize space in a work environment, while also suggesting that the printer may be connected to a network and the downloaded driver may be similar to a web browser (Love, col 11, ln 15-20). Additionally, Love suggests the use of a multifunctional printer as seen in fig 4, teaching a multifunctional printing system. Therefore, it would have been obvious to combine Minamizawa with Love to obtain the invention as specified in claim 1.

Regarding claim 4, which depends from claim 1, the combination of Love and Minamizawa teaches a method of revising software for a multifunctional printer wherein the bundle comprises a single file (Love, col 4, ln 40-43, software is bundled into a single Common File Format File).

Regarding claim 5, which depends from claim 4, the combination of Love and Minamizawa teaches a method of revising software for a multifunctional printer wherein the file has an extension associated with software bundles (Love, col 4, ln 40-43, software is bundled into a single Common Object File Format File, which implicitly has an associated extension with software bundles).

Regarding claim 6, which depends from claim 1, the combination of Love and Minamizawa teaches a method of revising software for a multifunctional printer wherein the software bundle comprises at least one software component selected from the group consisting of print media software and print finishing software (Love, col 4, ln 37-38, downloaded software includes a printer driver, wherein downloaded software is a revised, qualified, software bundle as explained in the rejection of claim 1).

Regarding claim 11, the combination of Love and Minamizawa (as combined in claim 1) teaches a computer-readable medium storing computer-executable instructions to search and locate software bundles that represent respective updated software components for a group of multifunctional printers using a web based graphical user interface (Minamizawa, col 7, ln 35-55, wherein software upgrades are developed by the manufacturer for a group of printers, e.g. a specific model. A computer is used to access the Internet, wherein the computer comprises a GUI as seen in fig 4. Using the Internet and the well-known method of using an Internet browser to navigate to a webpage, the user searches and locates software at the Internet homepage. Searching and locating is required to distinguish between different software programs provided to a plurality of printers, col 7, ln 55-65. The aforementioned method is not limited to a single printer or a single use. By performing the software revision on a plurality of printers, the software is loaded on to plural user selected MFPs) and subsequently load the software bundles on to user selected multifunctional printers (Love, col 2, ln 61-64, the Input/Output Subsystem controlling the loading software function comprises a control program. The printer also comprises a controller and ROM, col 2, ln 49-55) wherein the software bundles comprise a plurality of revisable software components (Love, col 4, ln 6-22, wherein multiple pieces of software may be downloaded to printer to revise/update functions of multifunctional printing system. Also see col 4, ln 37-39, wherein code is created by using a standard compiler and linker. Code in a compiler may additionally be a revision of previous code) for parts of the multifunctional printer (Love, fig 4, multifunctional printing system, and Minamizawa, fig 1, multifunctional

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printer #10 comprising a printer unit #18, a scanner unit #20, and a modem #19 for facsimile communication) and a qualified, revised software component for a part of the multifunctional printers (Love, col 4, ln 40-41, compiling the code characterizes, i.e. qualifies, software into object code files), the qualified revised software component qualified in conjunction with the plurality of revisable software components (Love, col 4, ln 6-15, ln 40-41, wherein all code is compiled, and wherein the plurality of software components for multifunctional printing system are revised).

Regarding claim 12, which depends from claim 11, the combination of Love and Minamizawa teaches a computer-readable medium storing computer-executable instructions further comprising instructions to initialize a multifunctional printer (Love, col 7, ln 19-23, final linking of new downloaded code configures printer for operation by setting in memory).

Regarding claim 13, which depends from claim 11, the combination of Love and Minamizawa teaches a computer-readable medium storing computer-executable instructions further comprising instructions to transmit information related to loading a software bundle on a multifunctional printer (Love, col 7, ln 19-28, new downloaded code is activated either automatically or by information transmitted by control panel).

Regarding claim 14, the combination of Love and Minamizawa (as combined in claim 1) teaches a method of revising software in a group of multifunctional printers (Minamizawa, fig 1, multifunctional printer #10 comprising a printer unit #18, a scanner unit #20, and a modem #19 for facsimile communication. Also see Love, fig 4, teaching a multifunctional printing system), comprising searching and locating, via a web based

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graphical user interface, software bundles that represent respective updated software components for each multifunctional printer (Minamizawa, col 7, ln 35-55, wherein software upgrades are developed by the manufacturer for a group of printers, e.g. a specific model. A computer is used to access the Internet, wherein the computer comprises a GUI as seen in fig 4. Using the Internet and the well-known method of using an Internet browser to navigate to a webpage, the user searches and locates software at the Internet homepage. Searching and locating is required to distinguish between different software programs provided to a plurality of printers, col 7, ln 55-65. The aforementioned method is not limited to a single printer or a single use. By performing the software revision on a plurality of printers, the software is loaded on to plural user selected MFPs) and subsequently loading the software on to user selected multifunctional printers in the form of updated software bundles (Love, col 6, ln 9-12, after code preparation is complete, software bundle is loaded onto printer) wherein the software bundles comprises a plurality of revisable software components (Love, col 4, ln 6-22, wherein multiple pieces of software may be downloaded to printer to revise/update functions of multifunctional printing system. Also see col 4, ln 37-39, wherein code is created by using a standard compiler and linker. Code in a compiler may additionally be a revision of previous code) for parts of the multifunctional printers (Love, fig 4, multifunctional printing system, and Minamizawa, fig 1, multifunctional printer #10 comprising a printer unit #18, a scanner unit #20, and a modem #19 for facsimile communication) and a qualified, revised software component for a part of the multifunctional printers (Love, col 4, ln 40-41, compiling the code characterizes, i.e.

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qualifies, software into object code files), the qualified revised software component qualified in conjunction with the plurality of revisable software components (Love, col 4, In 6-15, In 40-41, wherein all code is compiled, and wherein the plurality of software components for multifunctional printing system are revised).

Regarding claim 19, which depends from claim 14, the combination of Love and Minamizawa teaches a method of revising software for a multifunctional printer wherein the software bundle comprises at least one software component selected from the group consisting of print media software and print finishing software (Love, col 4, In 37-38, downloaded software includes a printer driver).

Regarding claim 24, the combination of Love and Minamizawa (as combined in claim 1) teaches a method of revising software in a group of multifunctional devices (Minamizawa, fig 1, multifunctional printer #10 comprising a printer unit #18, a scanner unit #20, and a modem #19 for facsimile communication, and col 1, In 40-42, and col 5, In 26-30 for updating software. See also fig 4 of Love disclosing a multifunctional printing system) comprising:

Revising at least one revisable software component of multi-component software (Love, col 4, In 37-39, code is created by using a standard compiler and linker);

Providing all other revisable software components of the group of multifunctional devices (Love, col 4, In 37-39, wherein all source code is compiled and linked. In col 4, In 47-62, of all the code compiled for software, "external" routines are routines that are resident in the printer, and "internal" routines are a revised component. External

routines are provided in the Relocation Table in the COFF file, and internal routines are provided in Raw Data Section (col 5, ln 59-42) of COFF file);

Qualifying the at least one revisable software component in conjunction with all of the other revisable software components (Love, col 4, ln 40-41, compiling the code characterizes software into object code files);

Bundling the multi-component software as software bundles (Love, col 4, ln 41-43, object files are combined (i.e. bundled) into a single software bundle);

Searching and locating the software bundles via a web based graphical user interface that represents updated software components for each respective multifunctional device (Minamizawa, col 7, ln 35-55, wherein software upgrades are developed by the manufacturer for a group of printers, e.g. a specific model. A computer is used to access the Internet, wherein the computer comprises a GUI as seen in fig 4. Using the Internet and the well-known method of using an Internet browser to navigate to a webpage, the user searches and locates software at the Internet homepage. Searching and locating is required to distinguish between different software programs provided to a plurality of printers, col 7, ln 55-65. The aforementioned method is not limited to a single printer or a single use. By performing the software revision on a plurality of printers, the software is loaded on to plural user selected MFPs); and

Loading the software bundle on to user selected multifunctional devices (Love, col 6, ln 9-12, after code preparation is complete, software bundle is loaded onto printer).

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Regarding claim 27, it is rejected for the same reason as claim 11. See Minamizawa, col 7, ln 35-38 for using a WWW GUI to search and locate software bundles on the Internet.

Regarding claim 28, which depends on claim 27, it is rejected for the same reason as claim 12.

Regarding claim 29, which depends on claim 27, it is rejected for the same reason as claim 13.

Claims 2, 10, 15, 17, 18, 23, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Love in view of Minamizawa and further in view of Yang (US 6,467,087), hereafter referred to as Love, Minamizawa, and Yang.

Regarding claim 2, which depends from claim 1, the combination of Love and Minamizawa teaches the method of revising software in a group of multifunctional printers comprising revising, providing, qualifying, bundling, searching and locating software components, and loading the software on to plural user selected multifunctional printers, as explained above in the rejection of claim 1. The combination of Love and Minamizawa does not disclose expressly a method of placing the bundle on a server. Yang, however, discloses a method of placing the bundle on a server (Yang, col 1, ln 51-56, wherein new versions of printer firmware are downloaded to a printer from an internet location, and col 2, ln 52-54, wherein the firmware flows from a remote server).

Love, Minamizawa, and Yang are combinable because they are all from a similar field of endeavor of updating printer programs. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the method of placing the bundle on a server as taught by Yang with the aforementioned combination of Love and Minamizawa teaching the method of revising, providing, qualifying, bundling, searching, locating, and loading multi-component software on a group of multifunctional printers. The suggestion for doing so was taught by Love by disclosing that the printer may be connected to a network and the downloaded driver may be similar to a web browser (Love, col 11, ln 15-20). Additionally, Minamizawa teaches downloading software from a manufacturer homepage. Thus the software must have been loaded onto a server to be accessed over the Internet. Therefore, it would have been obvious to combine Yang with the combination of Love and Minamizawa to obtain the invention as specified in claim 2.

Regarding claim 10, which depends from claim 1, the combination of Love, Minamizawa, and Yang teaches a method of revising software for a multifunctional printer further comprising completing a pending task prior to the loading (Yang, col 2, ln 2-5, updating method can be performed after general function conducted by printer).

Regarding claim 15, which depends from claim 14, the combination of Love, Minamizawa, and Yang teaches a method of revising software for a multifunctional printer further comprising placing the bundle on a server (Yang, col 1, ln 51-56, wherein new versions of printer firmware are downloaded to a printer from an Internet location, and col 2, ln 52-54, wherein the firmware flows from a remote server).

Regarding claim 17, which depends from claim 15, the combination of Love, Minamizawa, and Yang teaches a method of revising software for a multifunctional printer wherein the software bundle comprises a single file (Love, col 4, In 40-43, software is bundled into a single Common File Format File).

Regarding claim 18, which depends from claim 17, the combination of Love, Minamizawa, and Yang teaches a method of revising software for a multifunctional printer wherein the file has an extension associated with software bundles (Love, col 4, In 40-43, software is bundled into a single Common Object File Format File, which implicitly has an associated extension with software bundles).

Regarding claim 23, which depends from claim 14, the combination of Love, Minamizawa, and Yang teaches a method of revising software for a multifunctional printer further comprising completing a pending task prior to the loading (Yang, col 2, In 2-5, updating method can be performed after general function conducted by printer).

Regarding claim 25, which depends from claim 24, the combination of Love, Minamizawa, and Yang teaches a method of revising software for a multifunctional printer further comprising placing the bundle on a server (Yang, col 1, In 51-56, wherein new versions of printer firmware are downloaded to a printer from an internet location, and col 2, In 52-54, wherein the firmware flows from a remote server).

Regarding claim 26, which depends from claim 25, the combination of Love, Minamizawa, and Yang teaches a method of revising software for a multifunctional printer wherein the server comprises the multifunctional device (Yoshida, col 4, In 30-

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32, wherein the multifunctional machines provide, as server apparatuses, their functions to other apparatuses in the network).

Claims 7, 9, 20, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Love in view of Minamizawa and further in view of Kim et al. (US 6,473,788), hereafter referred to as Love, Minamizawa, and Kim.

Regarding claim 7, which depends from claim 1, the combination of Love and Minamizawa teaches the method of revising software in a group of multifunctional printers comprising revising, providing, qualifying, bundling, searching and locating software components, and loading the software on to plural user selected multifunctional printers, as explained above in the rejection of claim 1. The combination of Love and Minamizawa does not disclose expressly a method of executing administrative software to assist in the loading. Kim, however, teaches a method of executing administrative software to assist in loading of software onto a printer (Kim, col 6, ln 63-67, using an "Administration" web page, browser downloads corresponding applets for servicing of printer, causing programs to be executed).

Love, Minamizawa, and Kim are combinable because they are from a similar field of endeavor updating programs in printers. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the method of Kim comprising using administrative software to assist in loading software with the method of Love and Minamizawa comprising revising, providing, qualifying, bundling, searching, locating, and loading multi-component software on a group of multifunctional printers.

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The motivation for doing so would have been to provide a method of servicing and maintaining network peripheral devices remotely, such as from a centralized service organization of a device manufacturer, over a network, such as the World Wide Web (Kim, col 1, ln 42-47), while providing the security of an administrator loading package. Therefore, it would have been obvious to combine Kim with the combination of Love and Minamizawa to obtain the invention as specified in claim 7.

Regarding claim 9, which depends from claim 1, the combination of Love, Minamizawa, and Kim teaches a method of revising software in a multifunctional printer further comprising transmitting information related to the qualified, revised, software component (Love, col 4, ln 6-15, ln 40-41, wherein all code is compiled, and wherein the plurality of software components for multifunctional printing system are revised. See col 4, ln 6-22, wherein multiple pieces of software may be downloaded to printer to revise/update functions of multifunctional printing system. Also see col 4, ln 37-39, wherein code is created by using a standard compiler and linker. Code in a compiler may additionally be a revision of previous code) prior to, during and/or after the loading (Kim, col 1, ln 57-66, when a first packet is sent from a remote server to the network peripheral device, a second packet is sent from the network peripheral device back to the server. Finally, a third packet is sent from the remote server to the peripheral device, causing the software to be downloaded and the peripheral device to be serviced).

Regarding claim 20, which depends from claim 14, the combination of Love, Minamizawa, and Kim teaches a method of revising software in a multifunctional printer

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further comprising executing administrative software to assist in the loading (Kim, col 6, In 63-67, using an "Administration" web page, browser downloads corresponding applets for servicing of printer, causing programs to be executed).

Regarding claim 22, which depends from claim 14, the combination of Love, Minamizawa, and Kim teaches a method of revising software in a multifunctional printer further comprising transmitting information related to the qualified, revised software component revision (Love, col 4, In 6-15, In 40-41, wherein all code is compiled, and wherein the plurality of software components for multifunctional printing system are revised. See col 4, In 6-22, wherein multiple pieces of software may be downloaded to printer to revise/update functions of multifunctional printing system. Also see col 4, In 37-39, wherein code is created by using a standard compiler and linker. Code in a compiler may additionally be a revision of previous code) prior to, during and/or after the loading (Kim, col 1, In 57-66, when a first packet is sent from a remote server to the network peripheral device, a second packet is sent from the network peripheral device back to the server. Finally, a third packet is sent from the remote server to the peripheral device, causing the software to be downloaded and the peripheral device to be serviced).

Claims 8 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Love in view of Minamizawa and further in view of Siwinski et al. (US 2002/0015066), hereafter referred to as Love, Minamizawa, and Siwinski.

Regarding claim 8, which depends from claim 1, the combination of Love and Minamizawa teaches the method of revising software in a group of multifunctional printers comprising revising, providing, qualifying, bundling, searching and locating software components, and loading the software on to plural user selected multifunctional printers, as explained above in the rejection of claim 1. The combination of Love and Minamizawa does not disclose expressly a method wherein the multifunctional printer comprises a smart print cartridge that operates cooperatively with at least one software component of the software bundle. Siwinski, however, does teach a method of printing wherein the printer comprises a smart print cartridge (Siwinski, paragraph 42, wherein a radio-frequency transponder is integrally connected to each consumable item, and paragraphs 32, 34, and 36, wherein consumables include the ink in the printer and the print head itself). Love and Minamizawa teach a method of revising, providing, qualifying, bundling, searching, locating, and loading software onto a group of multifunctional printers. Siwinski includes machine control logic processor (#32 of fig 2), which operates the printer (paragraph 32), driving the print head. The method of Love and Minamizawa revises the software in a printer, which may include a printer driver (Love, col 1, ln 50-55). Thus, updating the printer driver in the combination of Love, Minamizawa, and Siwinski updates the control logic, thereby providing a smart print cartridge operating cooperatively with the revised software component.

Love, Minamizawa, and Siwinski are combinable because they are from the same field of endeavor of printing systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the method of Siwinski

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comprising including a smart print cartridge with a printer with the combination of Love and Minamizawa comprising revising, providing, qualifying, bundling, searching, locating, and loading multi-component software on a group of multifunctional printers. The motivation for doing so would have been to provide a printer and method adapted to sense data uniquely associated with a consumable loaded into the printer (Siwinski, paragraph 14) to obviate the need for manual entry of data describing an inkjet consumable, instead providing information to the operator or to the inkjet printer apparatus itself about a consumable loaded in the printer (Siwinski, paragraph 18). Therefore, it would have been obvious to combine Siwinski with the combination of Love and Minamizawa to obtain the invention as specified in claim 8.

Regarding claim 21, which depends from claim 14, the combination of Love, Minamizawa, and Siwinski teaches a method of revising software in a multifunctional printer wherein the multifunctional printer comprises a smart print cartridge that operates cooperatively with at least one software component of the software bundle (Siwinski, paragraph 42, wherein a radio-frequency transponder is integrally connected to each consumable item, and paragraphs 32, 34, and 36, wherein consumables include the ink in the printer and the print head itself. Love and Minamizawa teach a method of revising, providing, qualifying, bundling and loading software onto a multifunctional printer. Siwinski includes machine control logic processor (#32 of fig 2), which operates the printer (paragraph 32), driving the print head. The method of Love and Minamizawa revises the software in a printer, which may include a printer driver (Love, col 1, ln 50-55). Thus, updating the printer driver in the combination of Love,

Minamizawa, and Siwinski updates the control logic, thereby providing a smart print cartridge operating cooperatively with the revised software component).

Claims 30-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Love et al. (US 6,091,508) in view of Minamizawa et al. (US 6298421) and further in view of Venkatraman et al. (US 5956487), hereafter referred to as Love, Minamizawa, and Venkatraman.

Regarding claim 30, the combination of Love and Minamizawa (as combined in claim 1 above) teaches a multifunctional printer (Minamizawa, fig 1, multifunctional printer #10 comprising a printer unit #18, a scanner unit #20, and a modem #19 for facsimile communication. See also fig 4 of Love disclosing a multifunctional printing system) comprising:

An input (Love, figure 1, input cable #23) for receiving the software bundle (Love, col 2, ln 46-48) wherein the software bundle includes revisable software components (Love, col 4, ln 6-22, wherein multiple pieces of software may be downloaded to printer to revise/update functions of multifunctional printing system. Also see col 4, ln 37-39, wherein code is created by using a standard compiler and linker. Code in a compiler may additionally be a revision of previous code) for at least two printer parts (Love, col 4, ln 31-33, software components comprise instructions for controlling paper tray selection and control panel, for example) wherein at least one of the revisable software components comprises a qualified, revised software component (Love, col 4, ln 40-41, compiling the code characterizes, i.e. qualifies, software into object code files) qualified

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in conjunction with the other revisable software components (Love, col 4, ln 6-15, ln 40-41, wherein all code is compiled, and wherein the plurality of software components for multifunctional printing system are revised); and

A processor (Love, figure 3, Controller #3 controls operation of printer via instructions from ROM, col 2, ln 50-55) configured to distinguish each of the software components included in the software bundle (Love, col 9, ln 29-41, data is examined and each specific function of new downloaded code is determined and linked).

The combination of Love and Minamizawa does not disclose expressly a multifunctional printer comprising a graphical user interface for searching and locating a software bundle that represents updated software components for the multifunctional printer, wherein the graphical user interface allows a user to selectively update the printer parts. Venkatraman, however, teaches a multifunctional printer (Venkatraman, fig 1a, device #10, and col 3, ln 50-61, wherein device may be a printer of a fax machine) comprising a graphical user interface for searching and locating a software bundle that represents updated software components for the multifunctional printer (Venkatraman, col 3, ln 5-16, wherein device comprises an embedded web server. Web server comprises a web page (fig 3) as a home page for the printer, providing a graphical user interface. Home page #18 comprises updated software driver routines for the device #10, col 7, ln 15-23, i.e. the graphical user interface allows the user to search and locate updated software components as is inherent with navigating a web browser), wherein the graphical user interface allows a user to selectively update the

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printer parts (Venkatraman, fig 3, wherein homepage allows user to choose whether or not to update printer parts, thereby selectively updating the printer).

Love, Minamizawa, and Venkatraman are combinable because they are from a similar field of endeavor of updating printer software. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the multifunctional printer of Venkatraman comprising a GUI for searching and locating updated software with the multifunctional printer of Love and Minamizawa comprising an input for receiving the software, and a processor configured to distinguish software components. The motivation for doing so would have been to allow the users to centralize updating of software through local updating, thereby dynamically generating the web pages to reflect the updated state of the device (Venkatraman, 3, In 34-42). Additionally, the web page of Venkatraman may link to internal or external web pages in order to search, locate, and download software as taught by Minamizawa. Therefore, it would have been obvious to combine Venkatraman with Love and Minamizawa to obtain the invention as specified in claim 30.

Regarding claim 31, which depends from claim 30, the combination of Love, Minamizawa, and Venkatraman teaches a multifunctional printer wherein the input receives the software bundle via a network (Minamizawa, col 7, In 35-40, wherein software is received via a network).

Regarding claim 32, which depends from claim 30, the combination of Love, Minamizawa, and Venkatraman teaches a multifunctional printer further comprising a Web browser (Love, col 11, In 15-20, printer may be connected to a network and the

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downloaded driver may be a web browser. Also see Venkatraman, fig 1a, wherein device comprises web server #14 and web page #18).

Regarding claim 33, which depends from claim 30, the combination of Love, Minamizawa, and Venkatraman teaches a multifunctional device wherein one of the at least two printer parts comprises a scanner (Love, figure 4, multifunctional device comprises Printer #1 and Scanner #402).

Regarding claim 34, which depends from claim 30, the combination of Love, Minamizawa, and Venkatraman teaches a multifunctional device wherein one of the at least two printer parts comprises a stacker (Venkatraman, col 3, ln 50-55, wherein device may be a copier, and wherein it is well known to one of ordinary skill in the art that a copier may comprise a stacker to organize the media output from the device).

Regarding claim 35, which depends from claim 30, the combination of Love, Minamizawa, and Venkatraman teaches a multifunctional device wherein the processor is configured to recognize a file extension associated with a software bundle (Love, col 4, ln 40-43, software is bundled into a single Common Object File Format File, which implicitly has an associated extension with software bundles. Controller, i.e. processor, provides data control, thereby recognizing associated file extension).

Response to Arguments

Applicant's arguments, see Remarks, pages 10-12, filed May 9, 2006, with respect to the rejections of claims 1-36 under 35 U.S.C. 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon

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further consideration, a new ground(s) of rejection is made in view of Minamizawa et al. (US 6298421) and Venkatraman et al. (US 5956487).

Applicant is correct in asserting the previous combination of Love and Yoshida does not teach a method of searching and locating software bundles for a group of printers, and loading the software onto a plurality of user selected multifunctional printers. However, Minamizawa teaches a method comprising searching and locating software bundles for a group of printers. The user may search and locate software bundles as taught by Minamizawa by using an Internet browser to search and locate a manufacturer homepage and to search and locate the software bundles linked via the homepage. Searching and locating may be as simple as scanning a webpage for the correct link, entering a URL for a homepage or file location, or entering terms into a search engine to generate results for an inquiry. Locating may also be as simple as clicking on a link, as is well known in the art.

Additionally, Minamizawa teaches revising software for a group of printers. A manufacturer develops software for a specific model of printer. The revised software would then apply to the group of printers that are the same model. The printers are user selected when a specific user accesses the software source and loads the bundle on the printer. Repeating this process loads the software on to plural selected multifunctional printers. Selecting a specific printer to upgrade revises the software for a part of the group.

Venkatraman is cited for at least teaching a multifunctional device comprising a GUI for searching and locating a software bundle to update printer parts. The device as

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taught by Venkatraman hosts a server, wherein the server comprises a printer homepage for searching and locating software as explained above with Minamizawa.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Nguyen et al. reference, US 20030066066, is cited for teaching a method and apparatus for downloading software from a printer acting as a server to a client device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dillon J. Murphy whose telephone number is (571) 272-5945. The examiner can normally be reached on M-F, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams can be reached on (571) 272-7471. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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